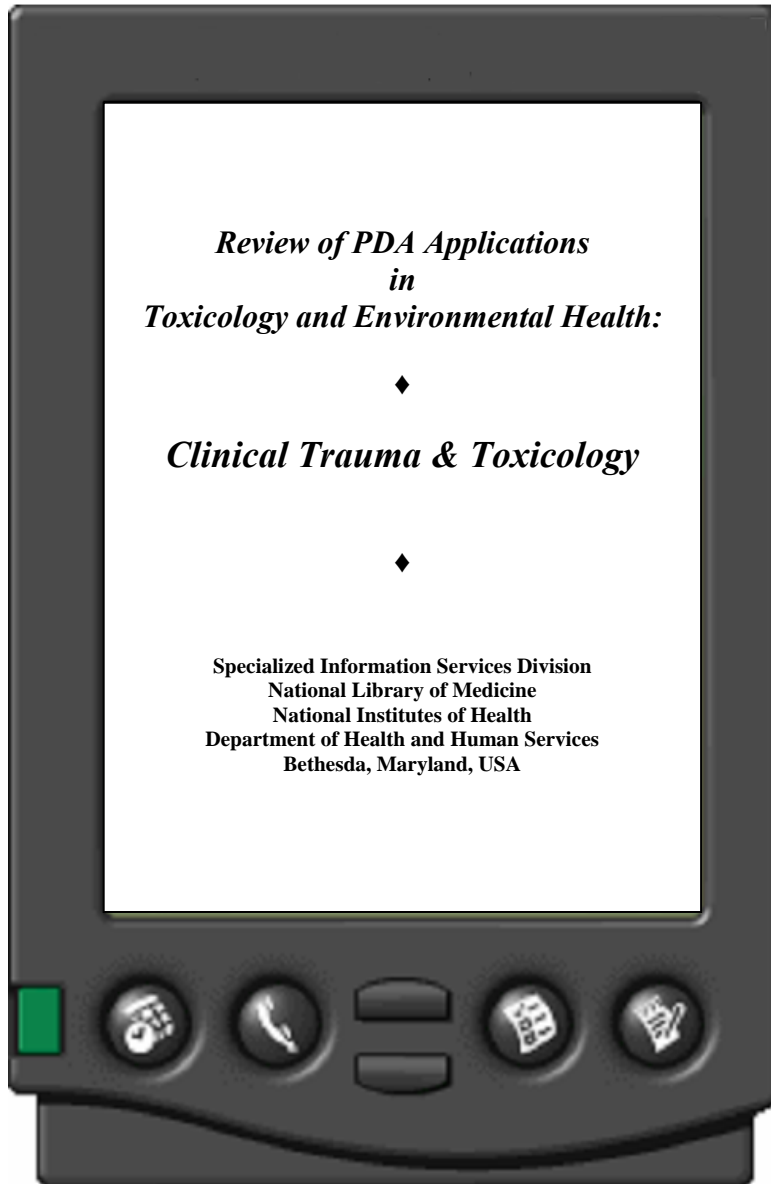**UNITED STATES**
National Library of Medicine

Review of PDA Applications
in
Toxicology and Environmental Health:

♦

Clinical Trauma & Toxicology

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Specialized Information Services Division
National Library of Medicine
National Institutes of Health
Department of Health and Human Services
Bethesda, Maryland, USA

Clinical Trauma & Toxicology

(Reviewed 05/2002)

General Information

For general comments regarding the *Review of PDA Applications in Toxicology and Environmental Health*, please see the **Overview**. The technical and content review of this PDA application – *Clinical Trauma & Toxicology (2.2)* – was based upon a free, downloadable demo. According to its author, Dr. Carl Weber, this e-document "is designed as a quick and yet extensive reference for the diagnosis and treatment of the majority of problems that may present in a primary care physician's practice." It also "provides concise, quick information that can be used during a busy clinical day." The stated purpose of its contents is to summarize adequately "medical information in a concise and easy-to-read format." Some of its special features include black-and-white illustrations, references, and detailed treatments and workups.

Intended Users

- ➢ Practicing Clinicians
- ➢ Resident Physicians
- ➢ Medical Students

Authorship/Data Source

This e-document was authored by Carl G. Weber, MD. The information it contains "has been culled from peer-reviewed articles and manuscripts, key textbooks and review courses published within the last few years." It has been edited by two board-certified emergency physicians.

Contents

This e-document covers topics relevant to emergency medical care, thus providing a portable information resource for those who require quick access to crucial information
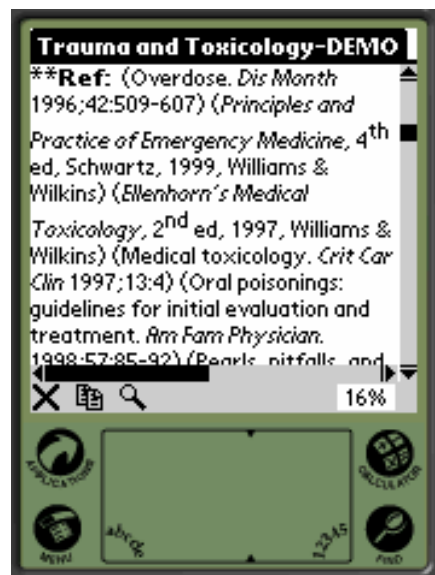
during medical emergencies. The following topics pertain specifically to toxicological emergencies:
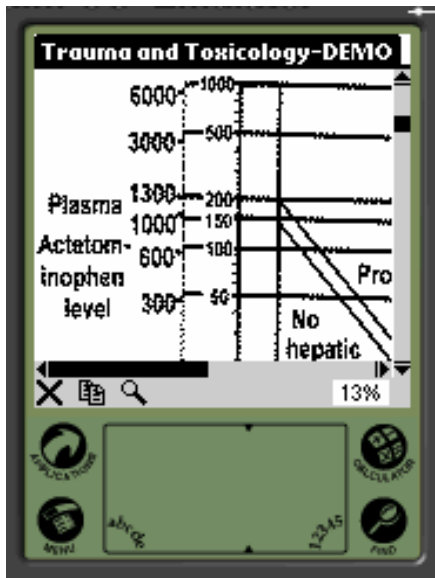
- ♦ Anaphylaxis
- ♦ Animal and Insect Bites/Stings
- ♦ Biological Weapons Information (added 01/30/02)
- ♦ Common Toxidromes
- ♦ Inhalational Injuries
- ♦ Marine Injuries (Envenomations)
- ♦ Radiation
- ♦ Substance Abuse
- ♦ Toxic Food Ingestions
- ♦ Toxicology Evaluation

◄ *This e-document is organized into sections providing concise symptomatic, diagnostic, and treatment information for specific toxicological emergencies. A listing of the contents at the beginning of the document shows all the sections and provides links to them. Additionally, there are links within individual sections.*
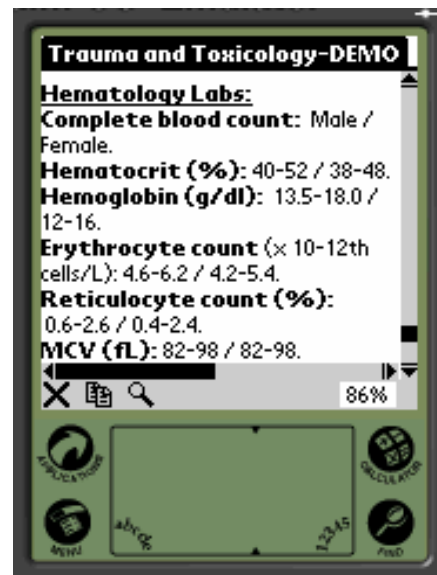
► *References are provided throughout the document at the end of each major section.*

Trauma and Toxicology-DEMO

Plasma Acetom-inophen level

6000
3000
1300
1000
600
300

1000
500
200
150
100
50

Pro

No hepatic

13%

◄ *Graphs, such as the Rumack–Matthew nomogram displayed in the section on acute acetaminophen poisoning, comple-ment some of the treatment protocols.*
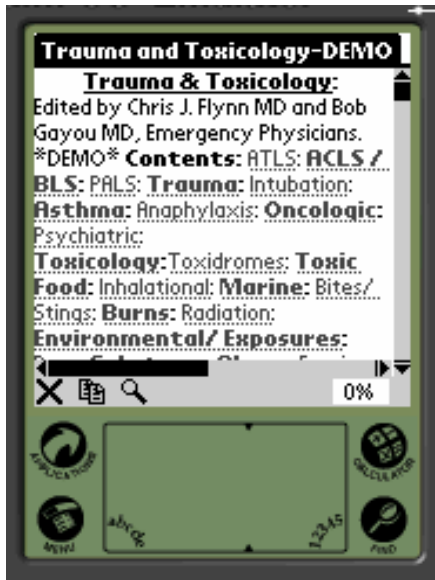
Trauma and Toxicology-DEMO

Hematology Labs:
Complete blood count: Male / Female.
Hematocrit (%): 40-52 / 38-48.
Hemoglobin (g/dl): 13.5-18.0 / 12-16.
Erythrocyte count (× 10-12th cells/L): 4.6-6.2 / 4.2-5.4.
Reticulocyte count (%): 0.6-2.6 / 0.4-2.4.
MCV (fL): 82-98 / 82-98.

86%

► *The document also lists common lab values, including hematology and endo-crinology lab values.*

Trauma and Toxicology-DEMO

Commonly Used Abbreviations:
Links: E: J: N: S:

1/2 NS = 0.45% saline solution
5-HIAA = 5-hydroxyindoleacetic acid
5-HT = serotonin
17-OHCS = 17-hydroxcorticosteroids
AAA = apply to affected area, abd aortic aneurysm

92%

◄ *An explanatory list of abbreviations and acronyms used throughout the docu-ment is provided at the end of the text.*

Navigation

This is an application that functions in an offline mode and does not require any degree of mobile connectivity. The iSilo™ reader is required to view the *Clinical Trauma & Toxicology* e-document.

◄ Once the document has been opened, the user will see a vertical and a horizontal scroll bar, text, and three icons underneath the viewing screen – End (for terminating the program), Copy (for highlighting text to be copied), and Find (for searching the document). A position counter, which indicates the user's position within the document displayed as a percentage value, is found at the bottom right side of the screen.

For more details, please see the **iSilo™** documentation.

Requirements

  ❖ Software: iSilo™

  ❖ Hardware: 500 KB memory (*Clinical Trauma & Toxicology*)
                           310 KB memory (iSilo™)
                           Palm OS 3.0+

Application Type/Price

  ❖ Shareware

  ❖ *Clinical Trauma & Toxicology*: $9.99 (includes free updates for 1 year)
  ❖ iSilo™: $17.50 (single-user license)

Availability

Clinical Trauma & Toxicology is available from commercial PDA software distributors. The iSilo™ reader is available from www.isilo.com.

Useful Web Links

For more information on iSilo™, go to www.isilo.com.

Review of PDA Applications
in
Toxicology and Environmental Health

Overview

Handheld computer devices known as Personal Digital Assistants (PDAs) are increasingly being used in the fields of toxicology and environmental health. Moreover, software applications covering specialized subject matter in these fields are increasingly being made available to PDA users.

In an effort to provide information on the main technical and content features of selected applications, the National Library of Medicine's Division of Specialized Information Services (SIS) has undertaken an ongoing review of them. Typically, individual reports in the review series are based on free, downloadable demos.

Each report typically covers the following topics: General Information, Intended Users, Authorship/Data Source, Contents, Navigation, Requirements, Application Type/Price, Availability, Useful Web Links, and Updates.
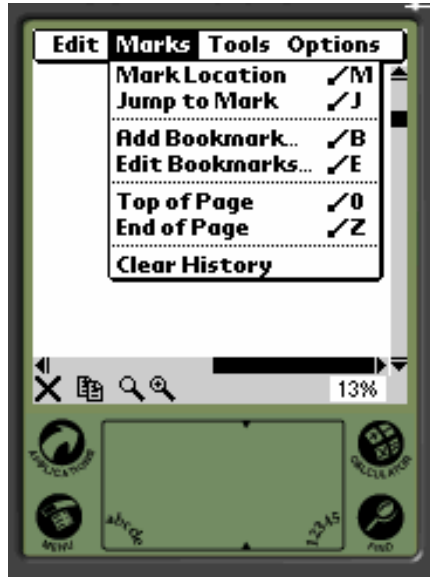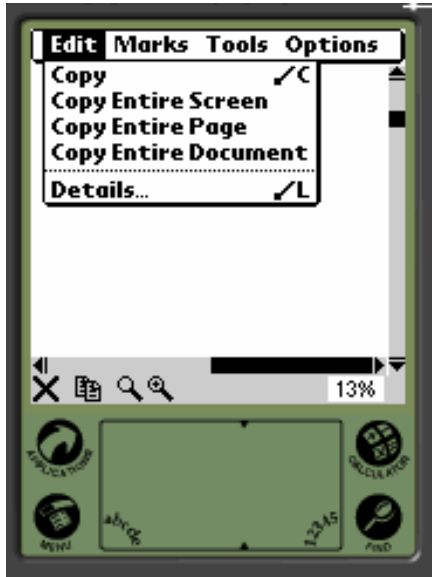
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Note: The *Review of PDA Applications in Toxicology and Environmental Health* is not intended to be all comprehensive, but rather a review of selected applications. SIS staff welcomes any comments on completed reviews or suggestions for additional reviews of applications not currently included, as long as they fall within the scope of toxicology and environmental health. You may contact us via email at tehip@teh.nlm.nih.gov with any comments, questions, or suggestions.

It is not the intention of SIS staff to recommend, or not recommend, any particular PDA device(s) or software application(s), but rather to provide an objective and descriptive review of the main technical and content features of selected applications based on their downloadable demo versions.

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iSilo™

When tapping on the title bar in iSilo™, a menu bar with four items – Edit, Marks, Tools, Options – is displayed, as shown in the screen shots below.

One drawback of the iSilo™ reader is that copying text is a bit cumbersome: you must first tap the Copy icon, then highlight the text to be copied, then tap the title bar to display the Edit menu, and finally select the Copy option. Other options, such as copying the entire screen, entire page, or entire document, are also available and easier to perform. Another limitation is the printing function; it would be nice to be able to print a document by beaming it to a printer on the fly.

With regard to bookmarks, iSilo™ allows you to add, edit, and clear bookmarks. You can also mark a location and jump to a mark.

Under Options, you can change display parameters such as font type (bold, large, large bold, or standard), choose to display the scrollbar on the right or left side of the screen, or left- or right-justify the text. Moving through text displays can be done by using the scroll bar, the 'screen down' button, or by touching the screen (embedded links facilitate navigation through different text sections). The screen is divided into regions that can be customized for scrolling up or down one screen or one line at a time.

◆

The following text was taken verbatim from the iSilo™ Web site (www.isilo.com):

iSilo™ is a highly versatile document reader for Palm OS® handhelds. You can find thousands of ready-made documents downloadable immediately for reading with iSilo™ or you can create your own documents from HTML content using iSiloX. Some of the major features that will win you over to iSilo™ include:

- **High text compression** in iSilo™ format documents result in a 50% to 60% decrease in size, which is about 20% better than the Palm Doc format, allowing you to store more and larger documents on your handheld.
- **Hyperlinks** make it much easier to navigate through a document.
- **Images** add visual richness to documents, especially photo-quality color pictures.
- **Tables** allow the display of tabular data.
- **Formatted text** gives style to text for controlled emphasis.
- **VFS** support allows you to store and access documents on high-capacity removable storage.

find

The find functionality gives you the ability to search for text with[in] a document or set of documents.

- **match case or not:** Specify a search word or phrase and specify whether to search for a match using case sensitivity or not.
- **search range:** Specify whether the search should proceed forward from the current location, backward from the current location, or starting from the top of either the current page or the entire document.
- **find again:** Quickly search for the next occurrence of a found word or phrase with a single tap.
- **global search:** Perform a global search through all listed documents or all documents listed in a given category.

copy & paste

You can copy text from a document to the clipboard for pasting to another application.

- **copy selection:** Select as much text as you like and copy it to the clipboard. Clipboard and memory limitations may limit the amount of text you can actually copy at once.
- **copy an entire screen:** Easily copy the entire screen with a single command.
- **copy an entire page:** Easily copy the entire page to the clipboard with a single command.
- **copy an entire document:** Easily copy the entire text of the document to the clipboard with a single command.

scrolling

iSilo™ provides a plethora of scroll methods, all configurable to suit virtually any preference.

- **scrollbar:** A scrollbar makes it easy to scroll to any part of the page or simply to scroll up or down a line or a screen at a time.
- **hardware up/down buttons:** Use the hardware up and down buttons to scroll up or down either a screen or a line at a time.
- **drag scrolling:** Drag on the screen using the stylus or your finger to scroll the document up or down.
- **screen tap scrolling:** Tap on the screen to scroll through the document up or down a line or a screen at a time. The regions are configurable in both size and action.
- **Jog Dial™/wheel:** If your device has a Jog Dial™ or jog wheel, you can also use it to scroll through the document up or down a line or a screen at a time.
- **autoscroll:** Twenty incremental autoscroll speeds and a choice of either smooth or line-at-a-time autoscrolling allow you to read at your own pace without the need for manual scrolling.

jumping

- **jump to the top or bottom:** With a single command, jump to the top or bottom of the page.
- **jump to any page:** Quickly jump to the previous or next page, to the first or last page, or to any page by page number.
- **hyperlinks:** Hyperlinks embedded in a document make it quick and easy to traverse to relevant parts of a document. Both text and images can serve as hyperlinks.
- **jump history:** Easily jump back to recent jump starting points and easily jump forward to recent jump targets.

- **back button:** If your device has a back or auxiliary button, you can use it to jump back through the jump history.

marks

Marks, both name[d] and unnamed, make it easy to remember and jump back to interesting points in a document.

- **unnamed marks:** Quickly mark a location in a document and jump back to the mark at any time. Each document can have its own mark.
- **named bookmarks:** Add named bookmarks to interesting locations in a document. Navigate back to any named bookmark by selecting from a pop-up list of the bookmarks.
- **local bookmarks:** Local bookmarks are private to the device on which they were created and are not stored in a document when it is transferred.
- **document bookmarks:** Document bookmarks are stored with the document and so also get copied along with a document when it is transferred.
- **bookmark sorting:** Sort bookmarks either alphabetically or manually.
- **rename bookmarks:** Give a bookmark a new, more appropriate name.

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